First report of Fruit rot in pear caused by Botryosphaeria dothidea (Moug. : Fr.) Ces. & De Not. in Italy.

First Report of Postharvest Fruit Rot in Pear Caused by *Botryosphaeria dothidea* (moug. Ex Fr.) Ces. & De Not in Italy. A. Garibaldi, D. Bertetti, A. Poli, and M. L. Gullino, Centre of Competence for the Innovation in the Agro-Environmental Sector (AGROINNOVA) Via Leonardo da Vinci 44, 10095 Grugliasco, Italy.

Pear (*Pyrus communis* L.) is widely grown in Italy, the leading producer in Europe. In summer 2011, a previously unknown rot was observed on fruit of an old variety "Spadoncina" in a garden in Torino Province (northern Italy). The decayed area of fruit was soft, brown, slightly sunken, surrounded by a margin irregular and circular. The internal decayed area appeared rotten and brown. Rotted fruit eventually felt down. Fragments (approximately 2 mm) were taken from the margin of the internal diseased tissues, cultured on potato dextrose agar (PDA) and incubated at temperatures between 20-28°C, under alternating light and darkness. Colonies of the fungus initially appeared whitish, then turning to dark gray and produced a dark pigment into the medium. After 25 days of growth, unicellular fusiform to elliptical hyaline conidia were produced. Conidia had a slightly obtuse apex and a truncated base and measured 16-24 x 5-7 (average 20.1 x 5.7) µm (length to width ratios were 2.8 to 4.6 with average of 3.5). The morphological characteristics are similar to that of the fungus *Botryosphaeria dothidea* (4). The Internal Transcribed Spacer (ITS) region of rDNA was amplified using the primers ITS1/ITS4, and sequenced. BLAST analysis (1) of the 473 bp segment showed a 100% similarity with the sequence of *B. dothidea* (GeneBank accession FM955378). The nucleotide sequence has been assigned the GenBank Accession JQ418493. Pathogenicity tests were performed by inoculating six pear fruits of the same cultivar after surface-disinfesting in 1% sodium hypochlorite and wounding. Mycelial disks (8 mm diameter), obtained from PDA cultures of one strain, were

placed on wounds. Six control fruits were inoculated with plain PDA. Fruits were incubated at 25±1°C. The first symptoms developed 2 days after the artificial inoculation. After 5 days, the rot was very evident and *B. dothidea* was consistently reisolated. Non-inoculated fruit remained healthy. The pathogenicity test was performed twice. *B. dothidea* was identified on *P. communis* in the US (2), South Africa, New Zealand and Japan (3). To our knowledge, this is the first report of the presence of *B. dothidea* on pear in Italy, as well as in Europe. In Italy, the economic importance of the disease on pear fruit is at present limited, although the pathogen could represent a risk for this crop.

References: (1) S.F. Altschul *et al*. Nucleic Acids Res., 25:3389, 1997. (2) L.F. Grand. Agr. Res. Serv. Techn. Bull. 240:1, 1985. (3) T. Kobayashi. Index of fungi inhabiting woody plants in Japan. Host, Distribution, and Literature. Zenkohu-Noson-Kyoiku Kyokai Publishing Co. Ltd, 1227 pages, 2007. (4) W.A. Sinclair, H.H. Lyon. Diseases of trees and shrubs. Second Edition, Cornell University Press, Ithaca, N.Y., USA, 660 pages, 2004.